wherein the SRS-Config comprises one or more SRS resource sets (SRS-ResourceSets), at least one SRS-ResourceSet of the one or more SRSResourceSets comprising one or more SRS resources.

**10**. The UE of claim **9**, wherein the baseband circuitry is further configured to:

control transmission of an SRS in the at least one SRS resource based on the UE being configured with at least one SRS resource for a configured transmission scheme via a higher layer parameter and the at least one SRS resource is indicated by a received downlink control information (DCI) or the RRC message; and

control transmission of a physical uplink shared channel (PUSCH) scheduled by DCI in a corresponding physical uplink control channel (PUCCH) resource with a lowest resource identifier (ID) within an active uplink (UL) bandwidth part (BWP) based on the UE not being configured with at least one SRS resource,

**11**. The UE of claim **9**, wherein the one or more SRS resources are configured to be used for one of periodic SRS transmissions, semi-persistent SRS transmissions, or aperiodic SRS transmissions.

**12**. The UE of claim **9**, wherein the at least one SRS-ResourceSet includes at least one SRS resource to be used for aperiodic SRS transmissions, and

wherein the baseband circuitry is further configured to:

receive downlink control information (DCI) including an SRS request field indicating the at least one SRS resource to trigger transmission of aperiodic SRS transmissions.

**13**. The UE of claim **7**, wherein the NZP-CSI-RS-ResourceSet includes a QCL-Info-PeriodicCSI-RS parameter to indicate a transmission beam for individual ones of the one or more NZP-CSI-RS resources.

**14**. A method to be performed by a user equipment (UE), the method comprising:

receiving a radio resource control (RRC) message, the RRC message including a non-zero power channel state information reference signal resource set (NZP-CSI-RS-ResourceSet) that indicates one or more non-zero power channel state information reference signal (NZP-CSI-RS) resources;

assuming the NZP-CSI-RS resources in the NZP-CSI-RS-ResourceSet having a same port index are to be transmitted with same antenna ports based on the NZP-CSI-RS-ResourceSet including a TRS-Info parameter set to 'on'; and

assuming the NZP-CSI-RS resources in the NZP-CSI-RS-ResourceSet are to be transmitted with a same downlink spatial domain transmission filter based on the NZP-CSI-RS-ResourceSet including a repetition parameter set to 'on'.

**15**. The method of claim **14**, wherein only one of the TRS-Info parameter or the repetition parameter is configured by the NZP-CSI-RS ResourceSet.

**16**. The method of claim **14**, wherein the RRC message comprises a sounding reference signal (SRS) configuration (SRS-Config),

wherein the SRS-Config comprises one or more SRS resource sets (SRS-ResourceSets), at least one SRS-ResourceSet of the one or more SRS-ResourceSets comprising one or more SRS resources.

**17**. The method of claim **16**, further comprising:

controlling transmission of an SRS in the at least one SRS resource based on the UE being configured with at least one SRS resource for a configured transmission scheme via a higher layer parameter and the at least one SRS resource is indicated by a received downlink control information (DCI) or the RRC message; and

controlling transmission of a physical uplink shared channel (PUSCH) scheduled by DCI in a corresponding physical uplink control channel (PUCCH) resource with a lowest resource identifier (ID) within an active uplink (UL) bandwidth part (BWP) based on the UE not being configured with at least one SRS resource.

**18**. The method of claim **16**, wherein the one or more SRS resources are configured to be used for one of periodic SRS transmissions, semi-persistent SRS transmissions, or aperiodic SRS transmissions.

**19**. The method of claim **16**, wherein the at least one SRS-ResourceSet includes at least one SRS resource to be used for aperiodic SRS transmissions, and

wherein the method further comprises:

receiving downlink control information (DCI) including an SRS request field indicating the at least one SRS resource to trigger transmission of aperiodic SRS transmissions.

**20**. The method of claim **14**, wherein the NZP-CSI-RS-ResourceSet includes a QCL-Info-PeriodicCSI-RS parameter to indicate a transmission beam for individual ones of the one or more NZP-CSI-RS resources.

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